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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/575,683	08/31/2006	Hyunsil Han	196034542	4626
26774 7590 06/15/2009 NIXON PEABODY LLP - PATENT GROUP 1100 CLINTON SQUARE ROCHESTER, NY 14604				
EXAMINER				
JAVANMARD, SAHAR				
ART UNIT		PAPER NUMBER		
1617				
MAIL DATE		DELIVERY MODE		
06/15/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/575,683

**Applicant(s)**

HAN ET AL.

**Examiner**

SAHAR JAVANMARD

**Art Unit**

1617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) 1-23,25-31,34-41 and 45-48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24 and 44 is/are rejected.
- 7) ☒ Claim(s) 32,33,42 and 43 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB08)  
Paper No(s)/Mail Date 7/10/06
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ ~~Notice of Informal Patent Application~~
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Status of the Claims***

This Office Action is in response to Applicant's Restriction Requirement remarks filed on April 17, 2009. Claim(s) 1-48 are pending. Claim(s) 1-23, 25-31, 34-41, and 45-48 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant's election of Group IV drawn to a method of inhibiting respiratory bursts and election of species of compound (9G01) and agent (cytokine) without traverse of the restriction requirement in the reply is acknowledged. The requirement is deemed proper and is therefore made FINAL. Claim(s) 24, 32, 33, and 42-44 are examined herein insofar as they read on the elected invention and species.

### ***Information Disclosure Statement***

The following documents were not available to the examiner at the time of examination: Documents listed on the Information Disclosure Statement filed 7/10/2006, Non Patent Literature Documents: crossed references are not available and therefore information referred to therein has not been considered.

Applicants may, in response to this and no later Office Action, submit the missing references. Such submissions will be considered to have been part of the respective Information Disclosure Statement filed on 7/10/2006, and the PTO-1449 will be updated

accordingly. No fee for the submission of such references is required, nor should applicants file an additional form PTO-1449 with the missing references.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 24 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (WO 2003024446) as evidenced by the Medilexicon medical dictionary

(<http://www.medilexicon.com/medicaldictionary.php?t=13063>) in view of Mitchell (US Patent No. 5,462, 946).

Yamamoto teaches oxidation stress inhibitors containing as the active ingredient a pyrazolone derivative represented by the formula (I) or its pharmaceutically acceptable salt [wherein  $R^1$  = H, aryl, C1-5 alkyl, C3-6 alkoxy carbonylalkyl (Applicant's  $R^2$  of compound 1);  $R^2$  = H (H in Applicant's compound 1);  $R^3$  = H, C1-5 alkyl, C5-7 cycloalkyl, C1-3 hydroxyalkyl, benzyl, naphthyl, Ph optionally substituted (Applicant's  $R^1$ ). Yamamoto teaches that the instant drugs are useful as a remedy for various oxidation stress diseases (for example, ischemic diseases and various diseases depending thereon, namely, cerebrovascular diseases such as brain infarction and brain attack, brain hypofunction and vascular dementia caused thereby, various brain diseases in association with aging such as cerebrovascular tissue lesion, various peripheral circulatory disorders based on cardiomyocardial ischemia such as cardiomyocardial infarction and heart failure, liver failure, and diabetes) (abstract).

Yamamoto does not specifically teach inhibiting respiratory bursts.

According to the definition provided by the Medilexicon medical dictionary, respiratory burst is the marked increase in metabolic activity that occurs in phagocytes and certain other cells following binding of particles resulting in an increase in oxygen consumption, formation of superoxide anion and formation of hydrogen peroxide.

Mitchell teaches that free radical have been implicated in ischemia/reperfusion injury, and have been important in neutrophil-mediated toxicity of foreign pathogens (column 1, lines 58-64).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have known that the pyrazole compounds taught by Yamamoto would also be effective in treating respiratory bursts as they relate to neutrophils. Yamamoto teaches the treatment of ischemic diseases. Based on the teachings of Mitchell, it would have been obvious to have known that in fact ischemic injuries are important in neutrophil-mediated toxicity of foreign pathogens and the instant compounds would necessarily treat respiratory bursts.

### ***Conclusion***

Claims 24 and 44 are not allowed.

Claims 32, 33, and 42-43 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sahar Javanmard whose telephone number is (571) 270-3280. The examiner can normally be reached on 8 AM-5 PM MON-FRI (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan can be reached on (571) 272-0629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/S. J./

Examiner, Art Unit 1617

/SREENI PADMANABHAN/

Supervisory Patent Examiner, Art Unit 1617